AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended): A voltage booster converter comprising:

[[-]] a pair of input terminals A and B for connecting a DC input voltage Vin between these two terminals;

[[-]] a pair P_0 of switches SB, SH in series connected by the switch SB to the input terminal B, the input terminal A being connected across an input inductor Lin to the connection point between the two switches SB and SH in series, each switch SB, SH comprising control means so as to be placed simultaneously, one in an on state the other in an isolated state;

[[-]] a pair of output terminals C and D, for powering, by an output voltage Vout, a load Rout, the output terminal D being connected to the input terminal B, ~~characterized in that it comprises:~~ wherein:

[[-]] K other additional pairs P_1, P_2,....P_i,...P_{K-1}, P_K of switches in series with the pair P_0 between the output terminal C and the switch SH with i = 1, 2,...K-1, K, the two switches of one and the same additional pair P_i being connected across an energy recovery inductor Lr_i;

[[-]] K input groups, Gin_1, Gin_2,...Gin_i,...Gin_{K-1}, Gin_K, of Ni capacitors C of like value each in series, with i= 1, 2,...K-1, K and Ni = i, the electrode of the capacitors of one of the two ends of each input group being connected to the common point between the two switches SB, SH of the pair P_0, at least the electrode of the capacitors of each of the other ends of the input groups being connected respectively to the common point between each the switch SH_i and the recovery inductor Lr_i of the corresponding pair P_i of like rank i,

[[-]] K output groups, $Gout_1$, $Gout_2$,...$Gout_i$,...$Gout_{K-1}$, $Gout_K$, of Mi capacitors C of like value each in series, with i = 1, 2,...K and Mi=(K+1)–i, the electrode of the capacitors of one of the two ends of the output groups being connected to the output terminal C, at least the electrode of the capacitors of each of the other ends of the output groups being connected respectively to the connection point between two pairs of consecutive switches P_{i-1} and P_i;

in that the switches of these other K additional pairs are controlled so as to form, when the switch SB of the pair P_0 linked to the terminal B is switched to the on state for a time Ton, a first capacitor network connected on the one hand across the switch SB to the terminal B and, on the other hand, to the terminal C, comprising the groups of input capacitors in series with the

groups of the output capacitors such that a group of input capacitors Gin_i is in series with its respective group of output capacitors $Gout_i$,

and in that when the switch SB of the pair P_0 linked to the input terminal B is switched to the isolated state for a time Toff these other K pairs of switches form a second capacitor network connected to the terminal A across the input inductor Lin comprising the input group Gin_K in parallel with the output group $Gout_1$, in parallel with groups of input capacitors in series with groups of the output capacitors such that a group of input capacitors Gin_{i-1} is situated in series with a group of output capacitors $Gout_i$.

2. (currently amended): The voltage booster converter as claimed in claim 1, ~~characterized in that~~ wherein the voltage Vout at the output of the converter is dependent on the duty ratio α=Ton/(Ton+Toff), the capacitors C of the networks having one and the same value, the voltage Vout is given by the relation:

Vout = (Vin/(1-α)).(K+1).

3. (currently amended): The voltage booster converter as claimed in ~~one of~~ claim[[s]] 1 ~~or 2, characterized in that~~ wherein it provides a positive output voltage Vout, the potential of the terminal A being greater than the potential of the terminal B, the potential of the output terminal C being greater than the potential of the output terminal D.

4. (currently amended): The voltage booster converter as claimed in ~~one of~~ claim[[s]] 1~~-to 3, characterized in that~~ wherein the switches SB_i and SH_i of the additional pairs P_i are diodes DB_i and DH_i, and in that the switch SH of the pair P_0 connected to the pair P_1 is a diode DH, only the switch SB of the pair P_0 being retained, the cathode of a diode of a pair P_{i-1} being connected to the anode of the diode of the next pair P_i.

5. (currently amended): The voltage booster converter as claimed in ~~one of~~ claim[[s]] 1 ~~to 4, characterized in that it comprises~~ wherein a first impedance Z_i having a diode Ddz in series with a resistor r, the anode of the diode Ddz being linked, in the circuit of the converter, to the recovery inductor Lr_1.

6. (currently amended): The voltage booster converter as claimed in ~~one of~~ claim[[s]] 1 ~~to 4, characterized in that~~ ~~it comprises~~ wherein another impedance Z_i having a diode Ddz in series with a Zener diode Dz, the two cathodes of the diode Ddz and the Zener diode Dz being linked together, the anode of the diode Ddz being linked, in the circuit of the converter, to the recovery inductor.

7. (currently amended): The voltage booster converter as claimed in ~~one of~~ claim[[s]] 1 ~~to 6, characterized in that~~ wherein each of the input Gin_i or output $Gout_i$ groups respectively comprises a single capacitor Cea_1, Cea_2,....Cea_i......Cea_K for the input group Gin_i and Csa_1, Csa_2...Csa_i... Csa_K, for the output groups $Gout_i$, and in that the value of each of the input capacitors Cea_i is deduced from the general structure by calculating the resultant capacitance of the Ni=i capacitors C in series, with i=1, 2,....K, i being the order of the input group considered:

$Cea_1 = C$ i=1

$Cea_2 = C/2$ i=2

....

$Cea_i = C/i$ i

......

$Cea_K = C/K$ i=K

the value of each of these output capacitors Csa_i being deduced from the general structure by calculating the resultant capacitance of Mi=(K+1)- i capacitors C in series, i being the order of the output group considered:

$Csa_1 = C/K$ i=1

$Csa_2 = C/(K-1)$ i=2

....

$Csa_i = C/(K+1)-i$ i

......

$Csa_K = C$ i=K

8. (currently amended): The voltage booster converter as claimed in ~~one of~~ claim[[s]] 1 ~~to 6, characterized in that it comprises~~ wherein interconnections between the capacitors of one and the same level Nv of potential, the structure having a single input group Gin and a single output

group Gout, and in that the input capacitor Ceb_i, for each of the potential levels Nin_i, connected between the connection points of the switches of two consecutive pairs P_i, P_{i-1}, will be deduced simply by calculating the capacitor Ceb_i equivalent to the capacitors in parallel of the level Nin_i, of potential considered, i.e.:

$Ceb_1 = C.K$	$i=1$
$Ceb_2 = C.(K-1)$	$i=2$
....	
$Ceb_i = C.((K+1)-i)$	i
......	
$Ceb_K=C$	$i=K$

the output capacitor Csb_i of each of the levels of potential $Nout_i$, connected in parallel with its respective pair of switches P_i will be deduced simply by calculating the capacitor Csb_i equivalent to the capacitors in parallel of the level $Nout_i$ considered, i being the order of the output level of potential considered, i.e.:

$Csb_1 = C$	$i=1$
$Csb_2 =C.2$	$i=2$
....	
$Csb_i = C.((K+1)-i)$	i
......	
$Csb_K =C.K$	$i=K$

9. (currently amended): The voltage booster converter as claimed in ~~one of~~ claim[[s]] 1 ~~to 8, characterized in that~~ ~~it comprises~~ <u>wherein</u> an output filtering capacitor Cout in parallel with the load Rout between the output terminals C and D.

10. (currently amended): The voltage booster converter as claimed in ~~one of~~ claim[[s]] 1 ~~to 2, characterized in that~~ <u>wherein</u> it provides a negative voltage, the potential of the terminal A being less than the potential of the terminal B, the potential of the output terminal C being less than the potential of the output terminal D.

11. (currently amended): The voltage booster converter as claimed in ~~one of~~ claim[[s]] 1 ~~to 10, characterized in that~~ wherein the switches are semiconductors comprising a control input (control means) so as to be placed simultaneously, one in an on state through the application to its control input of a first control signal, the other in an isolated state by the application to its control input of a second control signal complementary to the first.

12. (currently amended): A conversion structure ~~characterized in that it comprises~~ wherein several positive and[[/or]] negative converters, according to ~~one of~~ claim[[s]] 1 ~~to 11~~, in parallel.

13. (currently amended): The conversion structure as claimed in claim 12, ~~characterized in that~~ wherein the control signals of the converters of the conversion structure are out of phase so as to reduce the input and/or output current ripples of the booster converters.